April 20, 1937. H. OELBAUM 2,078,094

STAMPING MACHINE

Filed Feb. 25, 1936 2 Sheets-Sheet 1

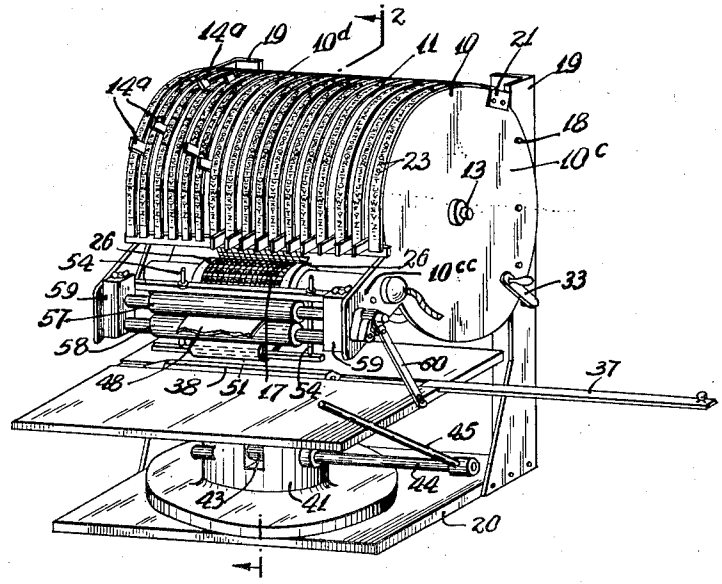

Fig. 1.

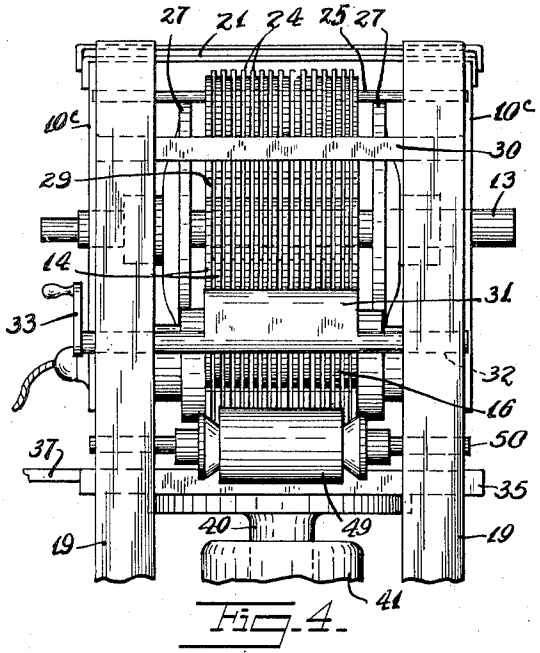

Fig. 4.

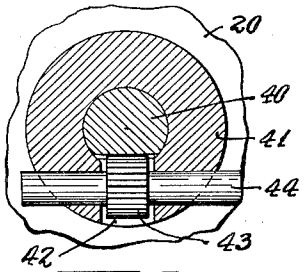

Fig. 5.

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STAMPING MACHINE

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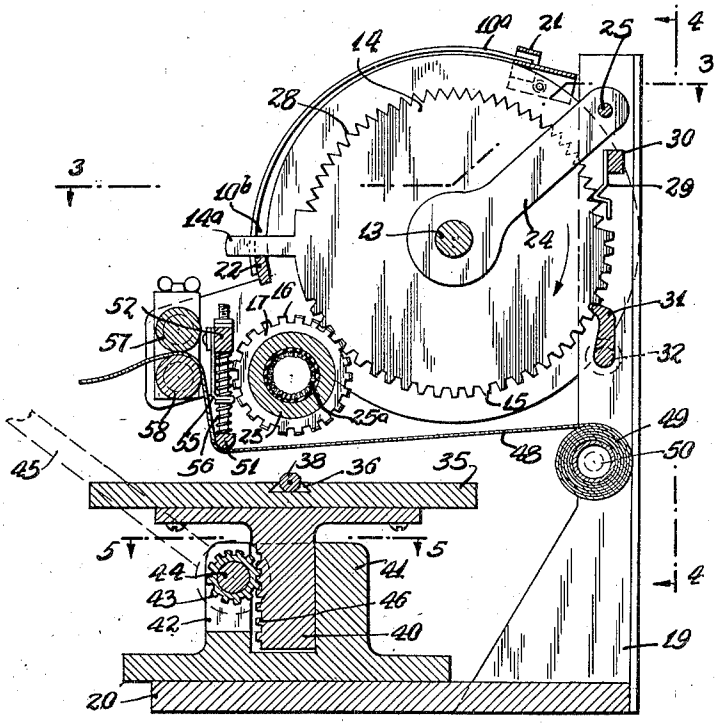

Fig. 2.

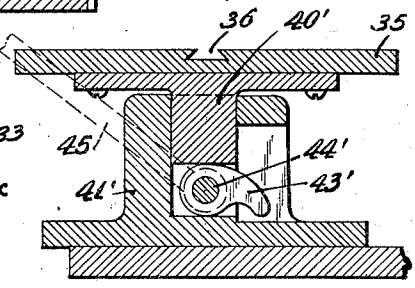

Fig. 6.

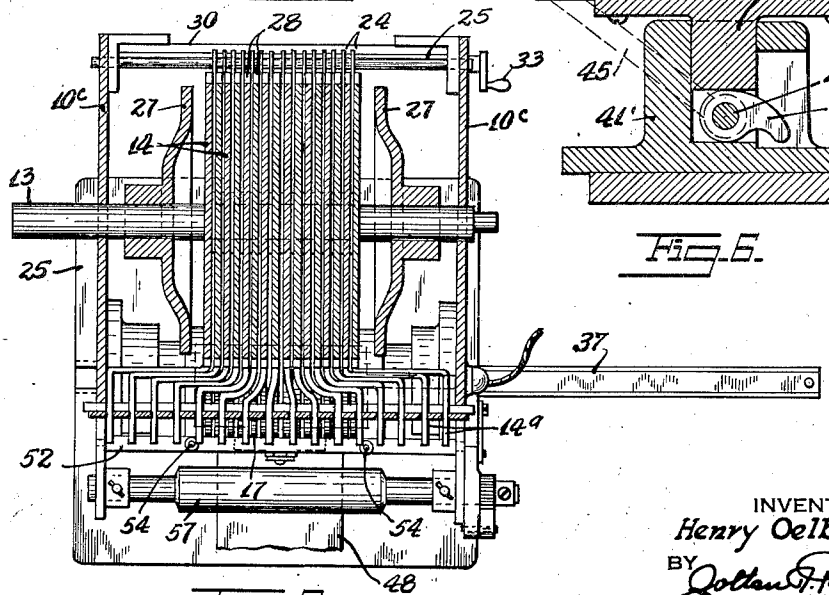

Fig. 3.

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UNITED STATES PATENT OFFICE

2,078,094

STAMPING MACHINE

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Application February 25, 1936, Serial No. 65,569

2 Claims. (Cl. 101—96)

This invention relates to new and useful improvements in a stamping machine.

The invention has for an object the construction of a stamping machine which is particularly adapted to stamp names or symbols upon pencils or other objects.

More specifically, the invention contemplates, in a stamping machine, the provision of a horizontal, hollow casing having a plurality of spaced parallel slots extending downwards from the top side to the front side, and a plurality of control discs with peripheral teeth rotative upon a shaft extended through the casing and having fingers projecting laterally and transversely and extending through said slots by which the discs may be adjusted.

Still further the invention contemplates the use of printing discs having peripheral teeth meshing with the peripheral teeth of the control discs and having letters or symbols on the ends of said teeth by which the printing operation is accomplished.

Furthermore, the invention also proposes the association of a printing table and an inking means with the mechanism mentioned in the previous paragraphs.

Another object of the invention is the construction of a device as described which is simple and durable and which may be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:—

Fig. 1 is a perspective view of a device constructed according to this invention.

Fig. 2 is a transverse vertical sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a rear elevational view of Fig. 2 looking in the direction of the line 4—4 thereof.

Fig. 5 is a horizontal sectional view taken on the lines 5—5 of Fig. 2.

Fig. 6 is a fragmentary vertical sectional view of a modified arrangement for operating the printing table.

The stamping machine, according to this invention, includes a horizontal hollow casing 10 having a plurality of spaced parallel slots 11 extending downwards from the top side 10*a* of the casing to the front side 10*b*. A shaft 13 is mounted coaxially through the casing and supports a plurality of control discs 14. These control discs have peripheral teeth 15 engaging with the peripheral teeth 16 of a plurality of printing discs 17. The control discs 14 are provided with projecting fingers 14*a* extending through the slots 11 by which the printing discs 17 may be adjusted.

The hollow casing 10 is formed from a pair of end discs 10*c* which are secured by fastening elements 18 upon the sides of a printing frame. This printing frame comprises a pair of spaced vertical angle irons 19 secured at their bottom ends upon a horizontal base 20. The shaft 13 is mounted between the end discs 10*c*. The spaced slots 11 are formed by a plurality of strips 10*d* which form a part of the hollow casing. These strips are secured at the top ends upon a transverse support 21 mounted between the discs 10*c*. At the bottom ends the strips 10*d* are secured to a support rod 22 also mounted between the end discs 10*c*. The spaces 11 are produced by the fact that the strips 10*d* are spaced from each other.

Each of the strips 10*d* are imprinted with letters or symbols 23 corresponding with similar letters or symbols upon the printing 17 as hereinafter further described.

The discs 14 are held in suitably spaced positions by a plurality of spacers 24 which are mounted between the discs and are supported by the shaft 13 and a support rod 25 mounted on the angle irons 19. The end discs 10*c* are formed with front lugs 10*cc* and the printing discs 17 are mounted between these latter-mentioned lugs. The printing discs 17 are selectively rotative on a tubular member 25 which is fixed between the lugs 10*cc*. Collars 26 (see Fig. 1) are mounted upon the tubular member 25 at the ends of the printing discs and serve to hold them against longitudinal motion. An electric heater 25*a* is mounted with the tubular member 25 to heat the printing teeth 16. This heat is necessary when certain types of inked or prepared transfer ribbons are used.

A pair of collars 27 are mounted upon the shaft 13 at the sides of the control discs 14 and serve to prevent the control discs from shifting. The control discs are also held in their proper positions by the projecting fingers 14*a*.

In Fig. 3 the fingers 14*a* are shown projecting from the discs and extending both laterally and longitudinally so as to extend out from the proper slots 11. There is one slot for each of the fingers.

These slots are spaced much further apart than the spacing of the control discs and it is for this reason that the fingers 14a must extend laterally as well as longitudinally to engage through these slots.

A means is provided for holding the control discs 14 in adjusted positions. This means includes a plurality of teeth 28 on portions of the peripheries of the discs 14 engaged individually by springs 29. These springs 29 are supported upon a bar 30 mounted between the frame 19.

An auxiliary mechanism is provided for locking the control discs 14 in desired adjusted positions. This means consists of a wide pawl 31 (see Figs. 2 and 4) supported upon a shaft 32 which is rotatively mounted on the frame 19. One end of the shaft projects and is provided with a handle 33. It is possible by moving this handle to engage or disengage the pawl 31 from the teeth 15.

A printing table 35 is located immediately below the printing discs 17. This table is provided with a dove-tailed slot 36 in which a dove-tailed slide 37 engages. The slide may be extended so that the slot is exposed, and a pencil 38 may be engaged in the slot and properly held in position during the printing operation as hereinafter further described. If it is desired to print other objects besides pencils it is merely necessary to push in the slide 37 and then the printing table has a flat top.

The printing table 35 is supported by a vertical member 40 slidably engaging into a bracket 41 which is mounted on the base 20. This bracket 41 has a side opening 42 in which a pinion 43 is located. The pinion 43 is mounted upon a shaft 44 which extends from the side of the bracket 41 and is equipped with a handle 45. The pinion 43 meshes with rack teeth 46 formed upon one side of the member 40. By turning the handle 45 it is possible to raise the printing table 35 with considerable pressure to accomplish the printing operation.

An inking device is associated with the printing discs and consists, essentially, of an inked or prepared transfer ribbon 48 drawn from a roll 49 which is supported on a shaft 50, in turn supported on the frame 19. The inked or transfer ribbon 48 extends beneath the heated printing discs 17 and against a resilient holding member 51. This holding member serves to normally hold a web portion of the ribbon spaced from the printing discs so that the printing discs may rotate freely. The purpose of resiliently mounting the member 51 resides in the fact that when the printing table 35 is raised into operative position the member 51 will be correspondingly raised and permit the impression from the printing discs through the ribbon 48.

The member 51 is supported upon several rods 54 (see Fig. 1) which in turn are supported upon a transverse bar 52 fixedly mounted between the lugs 10cc. Holding strips 55 are also mounted upon the bar 52 and serve to slidably support intermediate portions of the rods 54. Springs 56 are mounted above and below the supports 55 and act between the bar 52 and the member 51 for normally holding the member 51 in a neutral lowered position. The web of the inked ribbon 48, after passing beneath the member 51, extends upwards between a pair of feeding rollers 57 and 58. These rollers are mounted in bearings 59 mounted upon the lugs 10cc.

A feeding mechanism is associated with the rollers 57 and 58. The details of this feeding mechanism form no part of the invention and therefore will not be described in detail as similar feeding mechanisms are generally known. It is operated by a link 60 connected with the table 35. Each time the printing table 35 moves upwards (or downwards, depending on design) the web 48 is advanced a small distance. As far as this invention is concerned the web 48 may be advanced manually.

The operation of the device is as follows:—The handle 33 is moved to disengage the pawl 31. The control discs 14 are now ready to be adjusted. The projecting fingers 14a are moved to place them adjacent the letters 23 as is necessary to spell out one's name, or other arrangement. The springs 29 will hold the control discs 14 temporarily in any adjusted position. After the control discs 14 have been placed in their correct positions, the handle 33 is moved to engage the pawl 31 with the teeth 15 which then locks the discs against further motion.

During the turning of the discs 14 the printing discs 17 will turn in specific relation, since the teeth thereof engage the teeth 15. Thus, the printing discs are set into printing position merely by the proper adjustments of the fingers 14a. An article to be printed is placed on the printing table 35. The printing table is then caused to be raised by the proper operation of the handle 45. The symbols upon the teeth 16 will bear against the inked ribbon 48 and a transfer of some of the ink to the article will result.

In Fig. 6, the printing table 35 may be lifted by one or more cams 43' mounted on a shaft 44' which extends from the side of the bracket 41' and is equipped with a handle 45. The table 35 is supported by one or more vertical members 40'. The latter project over cams 43' so that when the handle 45 is turned the printing table is raised for the printing operation as previously described. With this arrangement it is possible to leave the table in the raised position.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. In a stamping machine, a base, a pair of spaced vertical angle irons mounted on said base, a horizontal hollow casing mounted on said angle irons and having a plurality of spaced parallel slots extending downwards from the top side to the front side, a shaft through the center of said casing, a support rod fixedly mounted between the said angle irons, a plurality of control discs with peripheral teeth rotative on said shaft and having fingers projecting laterally and transversely and engaging through said slots by which the discs may be adjusted, a plurality of spacers mounted between the said control discs and fixedly supported by the said shaft and said support rod and adapted to keep said control discs in spaced relation, and a plurality of printing discs with peripheral teeth engaging said teeth and having letters or symbols on the ends of said teeth and rotatively mounted on said casing.

2. In a stamping machine, a hollow casing, a shaft through the center of said casing, a plurality of control discs with peripheral teeth ro-

tative on said shaft, a means for rotating said discs, a plurality of stationary spacers mounted between the said control discs and adapted to keep said control discs in spaced relation, a plurality of printing discs having peripheral teeth engaging said teeth and having letters of symbols on the ends of said teeth and rotatively mounted on said casing, a support rod fixedly mounted in said casing, and said spacers being mounted between said support rod and said shaft.

HENRY OELBAUM.